Attributes

- * Gender dmg sex
 - _{Male} (1)
 - © Female (2)
- * Ethnicity dmg_ethnic
 - C Hispanic or Latino (1)
 - ^C Not Hispanic or Latino (2)
 - Not reported (-1)

* Race (select all that apply)

- American Indian or Alaskan Native dmg_native
- □ Asian dmg_asian
- □ Black or African American dmg_afamer
- □ Native Hawaiian or other Pacific Islander dmg_island
- □ White dmg_white
- □ Not reported dmg_norace
- Demographics complete dmg_complete
- Γ

Death date

Death Date:

deathdt

Study participation

VIOLET study_violet
 Enrollment date
 study_violetenrolldt
 Discontinuation date
 study_violetdiscondt

Randomization

RAND complete □ rand_fcomplete

This form cannot be completed until after the screening form has been completed and the patient has been enrolled in the study.

Date and time of randomization:

* rand_dt * rand_tm

* What was the randomization id provided by the randomization systematic systematic systematic systematic systematic systematic systematic systematics with the randomization systematic systematics and systematic systematic systematics and systematic systematics systematic systematics and systematic systematics systematics and systematic systematics systematics and systematics systematics systematics systematics and systematics systematics systematics and systematics systematics systematics and systematics systematics systematics and systematics systematics systematics systematics and systematics systematics systematics and systematics systematics systematics systematics and systematics systematics systematics systematics systematics and systematics systematics

Ventilator History

VENTHX complete

- □ venthx_fcomplete
- * Was the patient on mechanical ventilation (assisted breathing) at the time of randomization? venthx_atrand

° _{Yes} (1)

- ^O No (0)
- * Was mechanical ventilation (assisted breathing) started on or before study day 28? venthx_start
 - ° _{Yes} (1)
 - ^C No (0)
 - * First date of mechanical ventilation (assisted breathing): venthx_startdt
- * Was patient alive and on unassisted breathing (no longer on mechanical ventilation) on study day venthx_uabd28 28?
 - ° Yes (1)

о_{No} (0)

* Last date patient was on mechanical ventilation (assisted breathing): venthx_lastdt

Study termination and post-discharge

TERM complete

- □ term_fcomplete
- * Was the patient permanently withdrawn from the trial (study completion does not qualify as term_withdrawn withdrawal)?
 - \circ_{Yes} (1)
 - c _{No} (0)
 - * Date of withdrawal:

term withdrawndt

* Reason for withdrawal: term withdrawnspec

Study hospital discharge

* Was the patient discharged alive from the study hospital (through day 90)? term_dischd90

○ _{Yes} (1)

° _{No} (0)

- * Date of study hospital discharge: term dischd90dt
- * Was the patient on mechanical ventilation (assisted breathing) at discharge? term_ventdisch
 - ∩ _{Yes} (1)
 - ^O No (0)

* Study hospital discharge disposition: term_dischdisp

Attributes

- $\circ_{\text{Home}}(1)$
- C LTAC (2)
- C _{SNF} (3)
- $^{\rm C}$ Acute rehab facility (4)
- \circ Acute care hospital (5)
- C Long-term care facility (6)
- C _{Other} (888)
- * Specify:

term_dischdispspec

- - \circ_{No} (0)
 - * Date of discharge to home from post acute facility: term_pafdischdt

Day 90 status and safety

Complete these questions at time of death, or after day 90 follow-up.

* Day 90 vital status: term_status

- \circ Dead (1)
- C Alive (2)

* Date of death term deathdt

- * Location at Day 90 term_loc
 - _{Home} (1)
 - $^{\circ}$ LTAC (2)
 - ^C SNF (3)
 - C Acute rehab facility (4)
 - C Acute care hospital (5)
 - C Long term care facility (6)
 - ^C Other (888)
 - * Specify:

```
term_locspec
```

* Did the patient have a new diagnosis of kidney stone between randomization and study day 90? term kidneystoneyn

C Yes (1)

с_{No} (0)

* Date of first kidney stone between randomization and day 90: term_kidneystonedt

- * Was kidney stone information verified? term kidneystonver
 - Verified as correct (1)
 - $^{\circ}$ Unable to verify (2)

- * Did the patient experience a fall between randomization and day 90 Attributes term fallyn
 - \circ_{Yes} (1)
 - ° _{No} (0)
 - * Date of first fall between randomization and day 90: term falldt
- * Did the patient experience any fractures between randomization and day 90? term fracyn
 - C Yes (1)
 - ^C No (0)
 - * Were any of the fractures related to a fall? term fracrelated
 - ^O Yes (1)
 - ^C No (0)
 - * Date of first fall related fracture term fracdt
 - * Was the fall related fracture verified? term_fracverify
 - C Verified as correct (1)
 - C Unable to verify (2)

Patient reconsent

RC complete

□ rc fcomplete

- * Was written consent obtained from the patient during study hospitalization? rc reconsentyn
 - $^{\circ}$ Yes (1)
 - ° _{No} (0)
- * If not, why? rc_reconsentnreas
 - ^C Patient died (1)
 - C Patient never regained decision-making capability (2)
 - ^C Patient declined further participation in study (3)
 - ^C Other (888)
 - * Specify other reason patient not re-consented:
 - rc reconsentnreasspec

Day 90 EQ-5D-5L

EQ90 complete

- □ eq90 fcomplete
- * This data was obtained from: eq90 source
 - ^C Patient (1)
 - ^C Surrogate (2)
 - C Unknown (3)

* Mobility eq90_mobility

Attributes

- C I have no problems walking (1)
- C I have slight problems walking (2)
- ^C I have moderate problems walking (3)
- ^C I have severe problems walking (4)
- $^{\circ}$ I am unable to walk (5)
- Not answered (-99)

* Self-care eq90_selfcare

- $^{\circ}$ I have no problems washing or dressing myself (1)
- $^{\circ}$ I have slight problems washing or dressing myself (2)
- ^C I have moderate problems washing or dressing myself (3)
- $^{\circ}$ I have severe problems washing or dressing myself (4)
- ^C I am unable to wash or dress myself (5)
- © Not answered (-99)

* Usual Activities (e.g. work, study, housework, family or leisure activities) eq90_activities

- ^C I have no problems doing my usual activities (1)
- ^C I have slight problems doing my usual activities (2)
- ^C I have moderate problems doing my usual activities (3)
- ^C I have severe problems doing my usual activities (4)
- ^C I am unable to do my usual activities (5)
- ^C Not answered (-99)
- * Pain / Discomfort eq90_pain
 - $^{\circ}$ I have no pain or discomfort (1)
 - C I have slight pain or discomfort (2)
 - ^C I have moderate pain or discomfort (3)
 - C I have severe pain or discomfort (4)
 - ^C I have extreme pain or discomfort (5)
 - © Not answered (-99)
- * Anxiety / Depression eq90_anxiety
 - $^{\circ}$ I am not anxious or depressed (1)
 - C I am slightly anxious or depressed (2)
 - ^C I am moderately anxious or depressed (3)
 - ^C I am severely anxious or depressed (4)
 - ^C I am extremely anxious or depressed (5)
 - Not answered (-99)

ie randreas

IE complete

□ ie fcomplete

* Did patient meet the following inclusion criteria ie incl

- i. Age \geq 18 years
- i. Intent to admit to ICU from ED, hospital ward, operating room or outside facility?
- iii. Has one or more acute risk factors for ARDS and mortality contributing directly to the need for ICU admission

° _{No} (0)

Reasons for exclusion (select all that apply):

□ Not Excluded ie notexcl

Unable to Randomize within 12 hours of ICU admission decision ie rand

- ^C Study team unavailable (1)
- ^C Unable to measure Vit D level (2)
- ^C Patient unable to consent and surrogate unavailable (3)
- C Transferred from referring hospital ICU (4)
- ^C Other (888)
 - * Specify: ie_randreasspec

□ Unable to take study medication by mouth or enteral tube ie med

 \Box Baseline serum calcium > 10.2 mg/dL (2.54 mmol/L) or ionized calcium > 5.2 mg/dL (1.30 mmol/L) ie cal

- \Box Known kidney stone in past year or history of multiple (> 1) prior kidney stone episodes ie_kidneyst
- Decision to withhold or withdraw life-sustaining treatment (patients are still eligible if they are committed to full support except cardiopulmonary resuscitation if a cardiac arrest occurs)
- \Box Expect < 48 hour survival ie survival
- □ Mechanical ventilation exclusions (if no other risk factor present) ie mechvent
- □ Prisoner ie prisoner
- □ Pregnancy ie_pregnancy
- \Box Greater than 72 hours since hospital presentation (or > 3 calendar days since hospital ie_hosp3days presentation if transferred with no time stamp)
- □ Inability to obtain informed consent ie consent
 - ^C Treating physician refusal (1)
 - ^C Patient/surrogate refusal (2)
 - C Study team unavailable (3) ie_consentreas
 - ^C Unable to locate surrogate (4)
 - C Interpreter/translator required but not available (5)
- □ Not excluded but not enrolled ie nene

- * Reason not enrolled:
 - ie_nenespec

Screening

Consent

CONS complete

- □ cons fcomplete
- * Has informed consent been obtained for participation in the VIOLET study? cons consyn
 - C Yes (1)
 - ° No (0)
 - * Was initial consent obtained from the patient or from a surrogate? cons constype
 - ^C Subject (1)
 - C Surrogate (2)
- * Was consent obtained for the collection of samples for future genetic research in ARDS? cons genards
 - C Yes (1)
 - ^C No (0)

* Was consent obtained for the collection of samples for future genetic research for other conditions? cons genothers

- ^O Yes (1)
- ° _{No} (0)

Vitamin D screening

VITD complete

□ vitd fcomplete

- * Is the patient vitamin D deficient based on screening (250HD level <20 ng/mL)? vitd deficient
 - [°] Yes (1)
 - ^O No (0)
 - * Method used for 25OHD level vitd method
 - ^C Qualigen (1)
 - C Clinical lab (2)
 - * Is sample plasma or serum? vitd sampletype
 - C Plasma (1)
 - ^C Serum (only for sites with Siemens device) (2)

Date and time of blood draw for vitamin D screening:

* vitd_dt * vitd_tm

* First 25OHD level

ng/mL vitd 250hd1

* Second 25OHD level

ng/mL vitd_250hd2

Third 25OHD level

ng/mL vitd 250hd3

* Average of the 2 FastPack test results (values used to determine eligibility; if a FastPack value is < 12.9, use 12.9 when averaging):

_____ ng/mL vitd vitavg

Vitamin D supplements

Screening

- * Was the patient taking any vitamin D supplements or medications in the 30 days prior to the current vitd_vitd30d hospitalization?
 C Yes (1)
 - C_{No} (0)
 - ^C Unknown (-9)

* Average daily dose: vitd_vitddose* C IU C mcg vitd vitddoseunit

* Was the vitamin D supplement taken within the past week? vitd vitdweek

- ^C Yes (1)
- ^C No (0)
- C Unknown (-9)

Prior vitamin D clinical result

- * Is there a vitamin D level available in the clinical record from the previous 6 months? vitd_clinyn
 - ^o Yes (1)
 - ^O No (0)

* Most recent clinically available vitamin D level: vitd clin

ng/mL

Eligibility status: scrstat_scrstatus

- C In screening (1)
- C Failed screening (2)
- C Passed screening (3)

Risk factors

RISK complete

□ risk_fcomplete

* Select all acute risk factors for ARDS and mortality contributing directly to the need for ICU admission below:

Pulmonary

- Pneumonia risk pneumonia
- □ Aspiration risk_aspiration
- □ Smoke inhalation risk_smoke
- □ Lung contusion risk_lungcont
- Mechanical ventilation risk mechvent

Extra-pulmonary

- □ Shock risk_shock
 - * Indicate presumed etiology(ies) of shock:
 - □ Infection/sepsis risk shockinfec

□ Cardiogenic risk_shockcardio



- □ Anaphylactic risk shockanaphyl
- □ Hemorrhagic traumatic risk shockhemtrau
- □ Hemorrhagic non-traumatic risk_shockhemnontrau
- □ Other risk_shockother
 - * Please specify: risk_shockotherspec

□ Sepsis risk_sepsis

- * Indicate presumed source(s) of infection:
 - □ Thorax risk_sepsisthorax
 - □ Abdomen risk sepsisabdom
 - □ Skin or soft tissue risk sepsisskin
 - □ Bacterial meningitis risk_sepsismening
 - □ Urinary tract risk_sepsisutract
 - □ Central line infection risk_sepsiscline
 - \Box Other risk_sepsisother
 - * Please specify:
 - risk_sepsisotherspec
- □ Pancreatitis risk_pancreat

Other screening data

SCR complete

 \Box scr fcomplete

Date and time of "intent to admit to ICU":

* scr_icuintentdt * scr_icuintenttm

* Patient age (screen fails):

years scr_agescr

* Patient age (randomized patients):

```
years scr_age
```

- * Location when intent to admit to ICU criteria met: scr_admloc
 - C Referring hospital (1)
 - $^{\circ}$ Study hospital ED (2)
 - C Study hospital ward (3)
 - ^C Study hospital OR (4)

Screening

- C January (1)
- C February (2)
- C March (3)
- April (4)
- ^C May (5)
- ^C June (6)
- C July (7)
- C August (8) C September (9)
- ^C October (10)
- ° November (11)
- C December (12)

SDD	complet	e
Г	sdd	fcomplete

- * Was study drug administered? sdd_drugyn
 - ^C Yes (1)
 - о_{No} (0)

Date and time of administration:

* sdd_drugdt * sdd_drugtm

* Indicate reason(s) why study drug was not administered. (Select all that apply)

- □ Consent withdrawn sdd_conswithdraw
- □ Study drug unavailable sdd drug unavail
- □ Patient npo sdd_npo
- □ No naso-gastric tube sdd_nasogastric
- \Box Patient unavailable (procedure/OR/diagnostic testing) sdd_ptunavail
- □ Patient unstable (describe) sdd unstable
 - * Specify: sdd unstablespec
- * Was study drug tolerated (consumed entire drug volume with no *nausea*, *vomiting*, or *other* complaints within 60 minutes after dose)? sdd_drugtol
 - ^C Yes (1)
 - ° _{No} (0)
 - * Indicate reason(s) why study drug was not tolerated. (Select all that apply)
 - \Box Did not like the taste after consuming a partial dose sdd_nttaste
 - □ Experienced nausea after dosing sdd_ntnausea
 - \Box Vomited within 60 minutes after dosing sdd_ntvomit
 - \Box Had chest or abdominal pain (or heart burn) after dosing sdd ntheartburn
 - \Box Other sdd_ntother
 - * Specify:

sdd_ntotherspec

Baseline labs and medications

BLLABS complete

□ bllabs_fcomplete

* Total serum calcium level: bllabs_caser

mg/dL

<pre>* * mgdL (1) blabs_caionunits * mmst. (2) * WBC (faulable within the 12 hours prior to randomization):mm^2 blabs_wbc * Lactate (f mailable within the 12 hours prior to randomization):mmstL_blabs_lactate * Was prior taking any vitamin D supplements or medications in the 30 days prior to the current by the vital 30d morphatecastor * Yas (1) * Not 00 * Uniform (-9) * Was prior taking activation be past week? blabs_vitated variables in the Screening form * Was prior taking activation be apprived taking activation in the past week? blabs_vitated variables in the Screening form * Was prior taking culture supplements are within the past week? blabs_vitated variables in the Screening form * Was prior taking culture supplement taken within the past week? blabs_vitated variables in the Screening form * Was prior taking culture supplement taken within the past week? blabs_caaveek * Yas to calcium supplement taken within the past week? blabs_caaveek * Yas to calcium supplement taken week? blabs_caaveek * Yas to calcium supplement taken within the past week? blabs_caaveek * Yas to calcium supplement taken within the past week? blabs_caaveek * Yas to calcium supplement taken within the past week? blabs_caaveek * Yas to calcium supplement taken within the past week? blabs_caaveek * Yas to calcium supplement taken within the past week? blabs_caaveek * Yas to calcium supplement taken within the past week? blabs_caaveek * Yas to calcium supplement taken within the past week? blabs_caaveek * Yas to calcium supplement taken week? blabs_mile * Was the activate taken within the past week? blabs_mile * Was the activate taken within the past week? blabs_mile * Was the activate taken within the past week? blabs_mile * Was the calcium taken within the past week? blabs_mile * Was the activate taken within the past week? blabs_mile * Was the activate taken within the past week? blabs_mile * Was the activate taken within the past week? blabs_mile * Was the activate taken within the past week? blabs_mile * Was the activat</pre>	* Ionized calcium level: bllabs_caion	Baseline - Day 0	
am ³ bllabs_wbc * Lactac (If available within the 12 hours prior to randomization): * Market (If available within the 12 hours prior to randomization): * We prime taking any vlamin D supplements or medications in the 30 days prior to the current bllabs_vitd30d * Ver (1) * Ver (1) * Average day dos: * (1) (2) * Was the vlamin D supplement uses within the past week? bllabs_vitddoscumt * Was the vlamin D supplements in the 30 days prior to the current hospitalization? bllabs_ca30d * Ver (1) * No (0) * Vacanown (-9) * Was prior to the current hospitalization? bllabs_ca30d * Ver (1) * No (0) * Use a pairent taking supplement taken within the past week? bllabs_ca40sc * Was the intelligue of the past week? bllabs_ca40sc * Was the intelligue of the past week? bllabs_ca40sc * Was the intelligue of the past week? bllabs_ca40sc * Was the intelligue of the past week? bllabs_ca40sc * Was the intelligue of the past week? bllabs_ca40sc * Was the intelligue of the past week? bllabs_ca40sc * Was the intelligue of the past week? bllabs_ca40sc * Was the intelligue of the past week? bllabs_ca40sc * Was the intelligue of the past week? bllabs_ca40sc * Was the intelligue of the past week? bllabs_ca40sc * Was the intelligue of the past week? bllabs_ca40sc * Was the intelligue of the past week? bllabs_ca40sc * Was the intelligue of the past week? bllabs_ca40sc * Was the intelligue of the past week? bllabs_midlation? bllabs_midlation? bllabs_midlation? bllabs_midlation? bllabs_midlation? bllabs_midlation? bllabs_midlation? * Was the intelligue of the past week? bllabs_midlation? bllabs_midlation? * Was the intelligue of the past week		caionunits	
<pre>mmdLblabs_lactate * Was patient taking any vitamin D supplements or medications in the 30 days prior to the currentblabs_vitd30d * Normalization: * Yes (1) * No (0) * Unknown (-9) * Was the vitamin D supplement taken within the past week? blabs_vitddweek * Yes (1) * No (0) * Unknown (-9) * Wes patient taking exclusion supplements in the 30 days prior to the current hospitalization? bllabs_ca30d * Yes (1) * No (0) * Unknown (-9) * Average daily dose: - mg bllabs_cadose * Was the culcium supplement taken within the past week? bllabs_caweek * Yes (1) * No (0) * Unknown (-9) * Average daily dose: - mg bllabs_cadose * Was the culcium supplement taken within the past week? bllabs_caweek * Yes (1) * No (0) * Unknown (-9) * Was the culcium supplement taken within the past week? bllabs_caweek * Yes (1) * No (0) * Unknown (-9) * Was the culcium supplement taken within the past week? bllabs_caweek * Yes (1) * No (0) * Unknown (-9) * Was the culcium supplement taken within the past week? bllabs_caweek * Yes (1) * No (0) * Unknown (-9) * Was the value taking a multivalumin (MVI) in the 30 days prior to the current hospitalization? bllabs_mvi30d * Yes (1) * No (0) * Unknown (-9) * Was the value taking a multivalumin (MVI) in the 30 days prior to the current hospitalization? bllabs_mvi30d * Yes (1) * No (0) * Unknown (-9) * Was the value taking a multivalumin (MVI) in the 30 days prior to the current hospitalization? bllabs_mvi30d * Yes (1) * No (0) * Unknown (-9) * Was the value taking a multivalumin (MVI) in the 30 days prior to the current hospitalization? bllabs_mvi30d * Yes (1) * No (0) * Unknown (-9) * Was the value taking a multivalumin (MVI) in the 30 days prior to the current hospitalization? bllabs_mvi30d * Yes (1) * No (0) * Unknown (-9) * Was the value taking a multivalumin (MVI) in the 30 days prior to the current hospitalization? bllabs_mvi30d * Yes (1) * No (0) * Unknown (-9) * Was the value taking a multivalumin (MVI) in the 30 days prior to the current hospitalization? bllabs_mvi30d * None of th</pre>		o randomization):	
* We prove that there must no supplements or mediations in the 30 days prior to the current in the second secon		to randomization):	
<pre> Yes (1) No (0) Unknown (-9) * Average daily dose: mg bllabs_cadose * Was the calcium supplement taken within the past week? bllabs_cawcek</pre>	 * Was patient taking any vitamin D supplements or hospitalization? Yes (1) No (0) Unknown (-9) (1) * Average daily dose: * C bllabs_vitddose * Was the vitamin D supplement taken within the C Yes (1) Yes (1) No (0)) (2) IU ^C mcg <mark>bllabs_vitddoseunit</mark>	bllabs_vitd variables were disabled and replaced by the vitd_vitd
C Yes (1) C No (0) C Unknown (-9) * Was the patient taking a multivitamin (MVI) in the 30 days prior to the current hospitalization? bllabs_mvi30d C Yes (1) C No (0) C Unknown (-9) * What was the MVI labeled for? bllabs_mvilabel C Women's Health (1) C Men's Health (2) C Senior Health (3) C Unknown (-9) * Was the MVI taken within the past week? bllabs_mviweek C Yes (1) C No (0) C Unknown (-9)	 Yes (1) No (0) Unknown (-9) * Average daily dose: mg bllabs_cadose)d
C Yes (1) C No (0) C Unknown (-9) * What was the MVI labeled for? bllabs_mvilabel C Women's Health (1) C Men's Health (2) C Senior Health (3) C None of the above (4) C Unknown (-9) * Was the MVI taken within the past week? bllabs_mviweek C Yes (1) C No (0) C Unknown (-9)	○ _{Yes} (1) ○ _{No} (0)	past week? DIIADS_CAWEEK	
C Yes (1) C No (0) C Unknown (-9)	 Yes (1) No (0) Unknown (-9) * What was the MVI labeled for? bllabs_ Women's Health (1) Men's Health (2) Senior Health (3) None of the above (4) 		i30d
Medical history	○ _{Yes} (1) ○ _{No} (0)	llabs_mviweek	

MEDHX complete

□ medhx_fcomplete

Baseline - Day 0

* Is there a non-acute (pre-hospitalization) creatinine level available in the previous two years? medhx_creatyn ^C Yes (1) ^C No (0)
* Most recent pre-hospitalization creatinine level within the last 2 years:
mg/dL medhx_creat
* Is the patient on home mechanical ventilation (non-invasive ventilation or via tracheostomy)? medhx_homevent ^C _{Yes} (1) ^C _{No} (0)
$*$ Is the home mechanical ventilation used solely for sleep-disordered breathing? medhx_homeventsleep
C Yes (1)
$^{\circ}$ No (0) (1) (2)
* Height: medhx_height * C inches C cm medhx_heightunit
* Measured weight: medhx_weight Vital signs (most recent prior to randomization): (1) (2) * C lbs C kg medhx_weightunit
Blood pressure:
* Systolic: medhx_sbp _{mmHg}
mmHg
* Diastolic: medhx_dbp mmHg
* Heart rate: medhx hr
beats per min
* Respiratory rate: medhx_rate
- breaths per min (1) (2)
* Temperature: (1) (2) * C C F medhx_tempunit medhx_temp
* O ₂ sat:
% medhx_oxygen
* FiO ₂ :
(decimal) medhx_fio2
* Date of hospital admission: medhx hospadmdt
* ICU admission service medhx_icutype ^C Medical (1)
C Surgical scheduled (2)
C Surgical unscheduled (3) C Trauma (4)
C Other (888)
^C Not admitted to ICU (6)
* Specify:
medhx icutypespec

* Date of ICU admission medhx icuadmtdt

Baseline - Day 0

- * Pre-hospital level of care: medhx_prehosp
 - $^{\circ}$ Home independently (1)
 - C Home with help (2)
 - $^{\rm C}$ Home with professional help (3)
 - C Intermediate care or rehab facility (e.g. goal is to get patient better) (4)
 - ^C Nursing facility (e.g. goal is to meet patient's ongoing needs) (5)
 - C Acute care hospital (6)
 - ^C Homeless or living in a temporary shelter (7)
 - C Adult family home or other non-medical institutional setting (8)
 - ^C Other (888)
 - * Specify: medhx_prehospspec

Charlson [g]

CHARLG complete

□ charlg_fcomplete

* Is chronic health information available? charlg yn

- [°] Yes (1)
- o _{No} (0)

Charlson [q]

CHARL complete

charl fcomplete

Indicate whether each condition was present at hospital admission and prior to randomization.

		Yes	No	
*	AIDS (do not include HIV-positive without AIDS criteria)	C	С	charl_aids
*	Leukemia (AML, CML, ALL, multiple myeloma)	С	C	charl_leuk
*	Malignant lymphoma	c	c	charl_lymph
*	Hemiplegia	С	0	charl_hemiplegia
*	Cerebrovascular disease	o	0	charl_cerebvasc
*	A prior myocardial infarction	С	C	charl_myoinfarc
*	Congestive heart failure	c	c	charl_congheart
*	Peripheral vascular disease	С	0	charl_perivasc
*	Dementia	C	0	charl_dementia
*	COPD	C	0	charl_copd
*	Connective tissue disease	c	0	charl_contis
*	Peptic ulcer disease	C	0	charl_ulcer

* Solid tumor charl tumor

Baseline - Day 0

- $^{\circ}$ No solid tumor present (0)
- $^{\circ}$ Solid tumor present (exclude if > 5 years from diagnosis) (1)
- ^C Solid tumor with metastasis present (ever) (2)
- * Liver disease charl_liver
 - $^{\circ}$ No liver disease present (0)
 - ^C Mild liver disease present (without portal hypertension, includes chronic (1) hepatitis)
 - ^C Moderate/severe liver disease present (2)
- * Diabetes mellitus (DM) charl_diabetes
 - $^{\circ}$ No DM present (0)
 - $^{\circ}$ Uncomplicated DM present (no end organ damage present) (1)
 - C DM with end organ damage present (excludes diet controlled alone) (2)
- * Moderate to severe kidney disease charl kidney
 - $^{\circ}$ No moderate to severe kidney disease present (0)
 - ^C Moderate to severe kidney disease present (Cr > 3, ESRD, chart diagnosis of (1) CKD stage 5 (eGFR < 15 mL/min/1.73m²) not on dialysis)
 - ^C Moderate to severe kidney disease present and patient is dialysis dependent (2)

SOFA

SOFA complete

□ sofa_fcomplete

Collect these values, if available, from the 24 hours before randomization. If no values are available in that time window, you may use the closest value up to 6 hours after randomization.

* Lowest P/F:

sofa_pf

* PaO₂:

mmHg sofa_pao2

* FiO₂:

(decimal) sofa fio2

Glasgow Coma Score (GCS):

Use the last non-sedated Glasgow Coma Score (GCS) available. If no non-sedated values are available, use the most recent GCS score.

* Is the patient on a sedative or neuromuscular blocker? sofa_gcssedate

- \circ_{Yes} (1)
- ^C No (0)
- * Eye opening score: sofa gcseye
 - $^{\circ}$ None (1)
 - C To pain (2)
 - C To voice (3)
 - C Spontaneous (4)

- C Flaccid (1)
- C Abnormal extension (2)
- C Abnormal flexion (3)
- C Flexion withdrawal (4)
- C Localizes to pain (5)
- C Obeys commands (6)
- * Verbal response score: sofa gcsverbal
 - ^C None, or generally unresponsive on ventilator (1)
 - C Incomprehensible (2)
 - C Inappropriate, or questionably oriented if on ventilator (3)
 - C Confused (4)
 - C Oriented, or appears oriented if on ventilator (5)
- * Lowest platelets:
 - $10^{3}/\mu L (\times 1000/mm^{3})$ sofa_platl
- * Highest bilirubin:

^{mg/dL} sofa bilih

* Highest creatinine level:

mg/dL sofa_creath

* Lowest MAP:

mmHg (calculate if not available) sofa_mapl

- * Vasopressors (any infusions lasting > 1 hour): sofa vasoyn
 - [°] Yes (1)
 - ° No (0)
 - * Record highest infusion rate of each lasting > 1 hour:

□ Dobutamine [*] µg/kg/m	ⁱⁿ sofa_vasodobutyn	sofa_vasodobut
□ Dopamine [*] µg/kg/min	sofa_vasodopyn	sofa_vasodop
□ Epinephrine [*] µg/kg/m	in sofa_vasoepiyn	sofa_vasoepi
□ Norepinephrine * µg/k	^{g/min} sofa_vasonorepiyn	sofa_vasonorepi
□ Neosynephrine [*] µg/kg	^{g/min} sofa_vasoneosynyn	sofa_vasoneosyn
□ Vasopressin [*] units/min	ⁿ sofa_vasovasopyn	sofa_vasovasop

LIPS

LIPS complete

□ lips_fcomplete

* Did the patient undergo high-risk surgery during this hospitalization? lips_hrsurgyn

- ^O Yes (1)
- ^O No (0)

lips_hrsurgtype

- * What type of high-risk surgery:
 - ^C Orthopedic spine (1)
 - $^{\circ}$ Acute abdomen (2)

^C Cardiac (3)

 $^{\circ}$ Aortic vascular (4)

* Did the patient undergo emergency surgery during this hospitalization (this may overlap with highrisk)?

Baseline - Day 0

^C Yes (1)

^O No (0)

Please select Yes or No for each of the following risk factors:

- * Obesity (BMI \ge 30 in past 6 months): lips obeseyn
 - [°] Yes (1)
 - ^C _{No} (0)
 - ^C Information unavailable (777)
- * Chemotherapy (in the past 6 months): lips chemoyn
 - $^{\circ}$ Yes (1)
 - ^O No (0)
 - ^C Information unavailable (777)

* Alcohol abuse (ever): lips alcoholyn

- _{Yes} (1)
- с_{No} (0)
- ^C Information unavailable (777)

Please select Yes or No for each of the following risk factors for the current hospitalization:

- * Near drowning: lips_drownyn
 - ^C Yes (1)
 - ° _{No} (0)
- * Traumatic brain injury: lips_traumabrainyn
 - $^{\circ}$ Yes (1)
 - ^C No (0)

* Multiple fractures (defined as two long bones, or one long bone + pelvis): lips multifracyn

- \circ_{Yes} (1)
- с_{No} (0)

Please select *Yes* or *No* for each of the following risk factors with regard to the 24 hours before randomization. If no values are available for this time frame, you may use values up to 6 hours after randomization.

- * Tachypnea (respiratory rate > 30 breaths / min): lips respyn
 - ^C Yes (1)
 - o _{No} (0)
- * O₂ saturation < 95%: lips_oxyyn
 - Yes (1)
 - 0 _{No} (0)
- * $FiO_2 > 35\%$ (or >4L O_2 /min)? lips fio2yn
 - \circ_{Yes} (1)
 - с_{No} (0)

lips phyn

```
* Acidosis (blood pH level < 7.35 arterial or < 7.32 venous) Baseline - Day 0
```

^O Yes (1)

° _{No} (0)

^C Information unavailable (777)

* Please provide the blood albumin level closest to the time of randomization:

g/dL lips_albumin

ARDS assessment [g]

ARDSG complete

* Was the patient on mechanical ventilation this study day? ardsg ventyn

- ^o Yes (1)
- 0 _{No} (0)

ARDS assessment [q]

ARDS complete

□ ards_fcomplete

```
* Is there an ABG available between 0200 and 0800? ards abgyn
```

- ^C Yes (1)
- ° _{No} (0)

* PaO₂ for lowest P/F ratio: ards_abgypao2

mmHg

* FiO₂ for lowest P/F ratio: ards_abgyfio2

(decimal)

* PEEP at time of lowest P/F: ards_abgypeep

 $\mathrm{cm}\,\mathrm{H_2O}$

- * Are there SpO_2 values $\geq 80\%$ and $\leq 96\%$ during this time period? ards_abgnspo2yn
 - ^C Yes (1)
 - ° _{No} (0)

* SpO₂ corresponding to lowest imputed P/F:

```
% ards_abgnspo2
```

* FiO₂ corresponding to lowest imputed P/F:

_____ (decimal) ards_abgnfio2

* PEEP at time of lowest imputed P/F:

 $cm H_2O$ ards_abgnpeep

P/F or imputed P/F:

ards_pf

If P/F (or imputed P/F) < 300, FiO₂ \ge 0.4, and PEEP \ge 5:

ards hypox

- * Is hypoxemia valid, acute, and not fully explained by CBaseline Day 0
 - _{Yes} (1)
 - ° _{No} (0)
 - $^{\circ}$ P/F does not meet high-altitude ARDS cut off (2)
- * Is CXR or CT (± 1 day) consistent with ARDS? ards_cxrcons
 - ^C Yes (1)
 - ° _{No} (0)
 - ^C Equivocal (2)
 - ^C Met ARDS criteria on previous day (3)
 - C P/F does not meet high-altitude ARDS cut-off (4)

Baseline EQ-5D-5L

EQBL complete

- □ eqbl__fcomplete
- * This data was obtained from: eqbl_source
 - $^{\circ}$ Patient (1)
 - C Surrogate (2)
 - ^C Unknown (3)
- * Mobility eqbl mobility
 - ^C I have no problems walking (1)
 - ^C I have slight problems walking (2)
 - ^C I have moderate problems walking (3)
 - C I have severe problems walking (4)
 - $^{\circ}$ I am unable to walk (5)
 - ^C Not answered (-99)
- * Self-care eqbl_selfcare
 - $^{\circ}$ I have no problems washing or dressing myself (1)
 - ^C I have slight problems washing or dressing myself (2)
 - C I have moderate problems washing or dressing myself (3)
 - ^C I have severe problems washing or dressing myself (4)
 - ^C I am unable to wash or dress myself (5)
 - ^C Not answered (-99)

* Usual activities (e.g. work, study, housework, family or leisure activities) eqbl_activities

- ^C I have no problems doing my usual activities (1)
- ^C I have slight problems doing my usual activities (2)
- C I have moderate problems doing my usual activities (3)
- C I have severe problems doing my usual activities (4)
- ^C I am unable to do my usual activities (5)
- © Not answered (-99)
- * Pain / discomfort eqbl_pain
 - $^{\circ}$ I have no pain or discomfort (1)
 - $^{\circ}$ I have slight pain or discomfort (2)
 - ^C I have moderate pain or discomfort (3)
 - ^C I have severe pain or discomfort (4)
 - ^C I have extreme pain or discomfort (5)
 - © Not answered (-99)

* Anxiety / depression eqbl_anxiety

Baseline - Day 0

- C I am not anxious or depressed (1)
- C I am slightly anxious or depressed (2)
- C I am moderately anxious or depressed (3)
- ^C I am severely anxious or depressed (4)
- ^C I am extremely anxious or depressed (5)
- © Not answered (-99)

Sample collection

SAMP complete

- □ samp_fcomplete
- * Was a sample collected at **this time period**? samp_yn
 - ^O Yes (1)
 - ^C _{No} (2)

Actual date and time blood drawn for sample collection:

- * samp_dt * samp_tm
- * Accession number:

samp_accno

* Specify why sample was not collected:

samp_spec

ARDSG complete

□ ardsg_fcomplete

- * Was the patient on mechanical ventilation this study day? ardsg ventyn
 - \circ_{Yes} (1)
 - ° _{No} (0)

ARDS assessment [q]

ARDS complete

- □ ards_fcomplete
- * Is there an ABG available between 0200 and 0800? ards abgyn
 - $^{\circ}$ Yes (1)
 - ^O No (0)
 - * PaO₂ for lowest P/F ratio: ards abgypao2

mmHg

* FiO₂ for lowest P/F ratio: ards abgyfio2

(decimal)

* PEEP at time of lowest P/F: ards_abgypeep

cm H₂O

- * Are there SpO₂ values \geq 80% and \leq 96% during this time period? ards_abgnspo2yn
 - ^C Yes (1)
 - ^C No (0)
 - * SpO₂ corresponding to lowest imputed P/F: ards_abgnspo2
 - %
 - * FiO₂ corresponding to lowest imputed P/F: ards_abgnfio2

(decimal)

* PEEP at time of lowest imputed P/F: ards_abgnpeep

cm H₂O

P/F or imputed P/F:

ards_pf

If P/F (or imputed P/F) < 300, FiO₂ \ge 0.4, and PEEP \ge 5:

* Is hypoxemia valid, acute, and not fully explained by CHF or fluid overload? ards_hypox

[°] Yes (1)

- ^C No (0)
- $^{\circ}$ P/F does not meet high-altitude ARDS cut off (2)

ards_cxrcons

- * Is CXR or CT (± 1 day) consistent with ARDS?
 - ° Yes (1)
 - ° _{No} (0)
 - ^C Equivocal (2)
 - ^C Met ARDS criteria on previous day (3)
 - $^{\circ}$ P/F does not meet high-altitude ARDS cut-off (4)

Organ failure

ORGAN complete □ organ fcomplete * Was the patient on any vasopressors (infusion lasting >1 hour) this study day? organ vasoyn ^C Yes (1) ^O No (0) * Record highest infusion rate of each lasting > 1 hour: □ Dobutamine ^{*} µg/kg/min organ_vasodobutyn organ vasodobut µg/kg/min organ vasodopyn □ Dopamine * organ vasodop Epinephrine * µg/kg/min organ vasoepiyn organ vasoepi □ Norepinephrine * μg/kg/min organ_vasonorepiyn organ vasonorepi ____^{µg/kg/min} organ_vasoneosynyn Neosynephrine organ vasoneosyn □ Vasopressin units/min organ vasovasopyn organ vasovasop * Highest creatinine for this calendar day (if clinically available): mg/dL organ_creath * Was there new dialysis or RRT this study day? organ dialrrt \circ_{Yes} (1) ° _{No} (0) $^{\circ}$ N/A, new RRT reported on a previous study day (2)

Day 1 - 7

Labs and medications

LABS complete

□ labs fcomplete

- * Was the patient given vitamin D medication this study day? labs_vitd This includes anything ordered as "vitamin D" 1000 IU or more; it does not include vitamin D as part of an MVI or parenteral nutrition.
 - $^{\circ}$ Yes (1)
 - ° _{No} (0)
 - ^C Unknown (2)
 - * Total oral vitamin D medications:

labs_vitdtotal

* (1) (1) (mcg (2) labs_vitdtotalunits Collect lab values, if available, closest to 0800.

* Total serum calcium level (required on day 3 in first 300 patients, otherwise if clinically available):

mg/dL labs_caser

* Ionized calcium level:

labs_caion

- * Serum albumin

____ ^{g/dL} labs_albumin

LABS complete

□ labs fcomplete

* Was the patient given vitamin D medication this study day? labs_vitd This includes anything ordered as "vitamin D" 1000 IU or more; it does not include vitamin D as part of an MVI or parenteral nutrition.

- ^C Yes (1)
- с_{No} (0)
- C Unknown (2)
- * Total oral vitamin D medications:

labs_vitdtotal

* \cap_{IU} (1) \cap_{mcg} (2) labs_vitdtotalunits

Collect lab values, if available, closest to 0800.

* Total serum calcium level (required on day 3 in first 300 patients, otherwise if clinically available):

mg/dL labs_caser

- * Ionized calcium level: labs_caion
 - * ° mg/dL (1) labs_caionunits ° mmol/L (2)
- * Serum albumin
 - ____ g/dL labs_albumin

Adverse Event

Adverse event	
AE complete □ aefcomplete	
Date and time of adverse event:	
* ae_dt * ae_tm	
* COSTART term: ae userterm	[<u>lookup tool</u>]
MedDRA code: ae meddracode	_ []
* Description of adverse event: ae_desc	
* Was the adverse event serious? ae_serious ^C Yes (1) ^C No (0)	
 * Was the adverse event related to study drug administration? ae_reldrug C Definitely related (1) C Probably or possibly related (2) C Probably not related (3) C Definitely not related (4) C Uncertain relationship (5) 	
* Was the adverse event unexpected (not listed in the investigator brochure)? ae_ C Yes (1) C No (0)	unexpected
 * What was the status of the adverse event at the time of the initial AE report? ae C Recovered (1) C AE present, no treatment (2) C AE present, being treated (3) C Residual effect / no treatment (4) C Residual effect / being treated (5) C Deceased as a result of the AE (6) 	_status
 * What was the final outcome of the adverse event? ae_outcome C Recovered (1) C AE present, no treatment (2) C AE present, being treated (3) C Residual effect / no treatment (4) C Residual effect / being treated (5) C Deceased as a result of the AE (6) 	
* Date of recovery	

ae	recdt

Adverse event ID: ae_id

Adverse Event

PD complete	
□ pdfcomplete	
* Date deviation occurred: pd_devdt	
* Date deviation discovered: pd_devrepdt	
 * Type of deviation: pd_devtype C Eligibility error (1) C Drug error (2) C Incorrect treatment assignment (3) C Sample error (4) C Consent error (5) C Other (888) 	
 * Type of drug error: pd_drugtype ^O Wrong dose (1) ^O Wrong drug administered (3) ^O More than 2 hours from randomization to start of drug (4) ^O Other (888) 	
* Please specify: pd_other	
* Describe deviation: pd_desc	
* Describe steps taken to resolve the deviation and prevent future occurrences: pd_resolution	
 * Was study drug temporarily or permanently discontinued as a result of this deviation? ° Yes (1) ° No (0) 	d_drugstop
 * Was an adverse event reported as a result of this deviation? pd_ae • Yes (1) • No (0) 	

Protocol deviation ID: pd_id

Protocol Deviation